

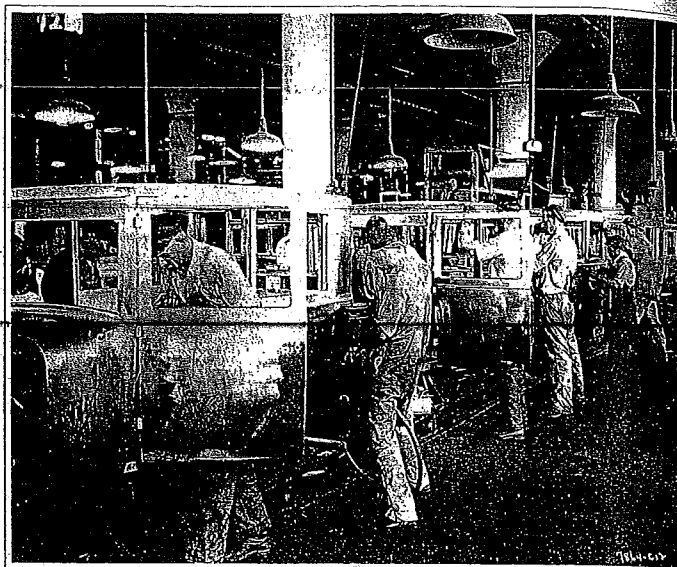
Berenson/Tallevi

US32

AFTER SEVENTEEN

From - Alan Brinkley - America's Story

LE PRODUCTION Workers
sh and paint automobile bodies
only in 1918, just after the
t War I. By then, General Motors
I as the giant of the industry,
ody was one of many
t had bought to consolidate its
the entire production process.
d Motors Corporation. Used with
GM Media Archives.)



Read + Take notes
on a separate
sheet of paper

* pay attention
to under-
lined
words!

the path by which agricultural and industrial
developed. When a railroad line ran through
populated region, new farms and other ec-
tivity quickly sprang up along the route. When
forests, lumberers came quickly in its wake
n felling timber to send back to towns and
sale. When it moved through the great plains
st, it brought buffalo hunters who nearly exter-
he great herds of bison and, later, helped trans-
e into the region and carry western meat back
cities. Because Chicago was the principal rail-
of the central United States, it also became the
ere railroads brought livestock, making the city
lterhouse of the nation. Everywhere the rail-
t, the economic, social, and physical landscape
untry changed as a result.

ds even altered concepts of time. Until the
ere was no standard method of keeping time
community to another. In most places, the posi-
ie sun determined the time, which meant that
ere set differently even between relatively
wns. This created great difficulties for railroads,
re trying to set schedules for the entire nation.
nber 18, 1883, the railroad companies, working
agreed to create four time zones across the con-
ch an hour apart from its closest neighbor.
not until 1918 did the federal government make
e zones standard for all purposes, the action by
ads very quickly solidified the idea of "standard
ugh most of the United States.

decade in the late nineteenth century, total rail-
age increased dramatically: from 30,000 miles in

1860 to 52,000 miles in 1870, to
93,000 in 1880, to 163,000 in
1890, and to 193,000 by 1900.

Rapid Expansion of the
Railroad Network

Subsidies from federal, state, and local governments—as
well as investments from abroad—were vital to these vast
undertakings, which required far more capital than private
entrepreneurs in America could raise by themselves.
Equally important was the emergence of great railroad
combinations that brought most of the nation's rails under
the control of a very few men. Many railroad combina-
tions continued to be dominated by individuals. The
achievements (and excesses) of these tycoons—Cornelius
Vanderbilt, James J. Hill, Collis P. Huntington, and others—
became symbols to much of the nation of great economic
power concentrated in individual hands. But railroad
development was less significant for the individual barons
it created than for its contribution to the growth of a new
institution: the modern corporation.

The Corporation

There had been various forms of corporations in America
since colonial times, but the modern corporation emerged
as a major force only after the Civil War, when railroad
magnates and other industrialists realized that no single
person or group of limited partners, no matter how
wealthy, could finance their great ventures.

Under the laws of incorporation passed in many states
in the 1830s and 1840s, business organizations could
raise money by selling stock to members of the public.
after the Civil War, one industry after another began
doing so. At the same time, affluent Americans began to

RAILROADS, 1870-1890
network of rail lines in the U.S.
between 1870 and 1890, miles
economic growth in these years

For an interactive version

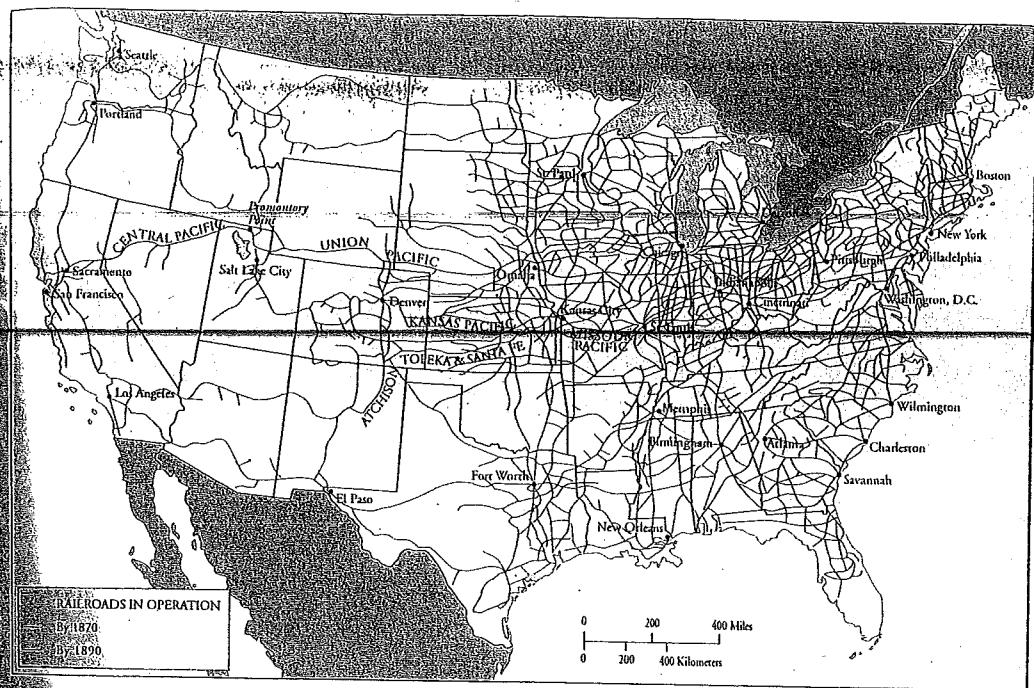
consider the purchase
if they were not the
whose stock they were
the, appealing was

Limited Liability

ments; they were not
might accumulate bey-
abroad public made
rather vast sums of ca-
The Pennsylvania R
first to adopt the new
but it quickly spread b-

Andrew Carnegie

who, had worked his
and in 1873 opened
soon he dominated
much like those of ot
and prices by striking
bought out rivals who
his associate Henry Cl



RAILROADS, 1870-1890 This map illustrates the rapid expansion of railroads in the late nineteenth century. In 1870, there was already a dense network of rail lines in the Northeast and Middle West, illustrated here by the green lines. The red lines show the further expansion of rail coverage between 1870 and 1890, much of it in the South and the areas west of the Mississippi River. ♦ *Why were railroads so essential to the nation's economic growth in these years?*

For an interactive version of this map go to www.mhhe.com/brinkley12ch17maps

consider the purchase of stock a good investment even if they were not themselves involved in the business whose stock they were purchasing. What made the practice appealing was that investors had only **“limited liability”**—that is, they risked only the amount of their investment. They were not liable for any debts the corporation might accumulate beyond that. The ability to sell stock to a broad public made it possible for entrepreneurs to raise vast sums of capital and undertake great projects. The Pennsylvania Railroad and others were among the first to adopt the new corporate form of organization. It quickly spread beyond the railroad industry. In steel, the central figure was Andrew Carnegie, a Scottish immigrant who had worked his way up from modest beginnings and in 1873 opened his own steelworks in Pittsburgh. Soon he dominated the industry. His methods were much like those of other industrial titans. He cut costs and made by striking deals with the railroads and then bought out rivals who could not compete with him. With his associate Henry Clay Frick, he bought up coal mines

and leased part of the Mesabi iron range in Minnesota, operated a fleet of ore ships on the Great Lakes, and acquired railroads. Ultimately, Carnegie controlled the processing of his steel from mine to market. He financed his undertakings not only out of his own profits but out of the sale of stock. Then, in 1901, he sold out for \$450 million to the banker J. Pierpont Morgan, who merged the Carnegie interests with others to create the giant United States Steel Corporation—a \$1.4 billion enterprise that controlled almost two-thirds of the nation's steel production.

There were similar developments in other industries. Gustavus Swift developed a relatively small Chicago meatpacking company into a great national corporation, in part because of profits he earned selling to the military in the Civil War. Isaac Singer patented a sewing machine in 1851 and created I. M. Singer and Company, one of the first modern manufacturing corporations.

Many of the corporate organizations developed a new approach to management. Large, national business enterprises needed more systematic administrative structures than the limited, local ventures of the past.



ANDREW CARNEGIE Carnegie was one of a relatively small number of great industrialists of the late nineteenth century who genuinely rose "from rags to riches." Born in Scotland, he came to the United States in 1848, at the age of thirteen, and soon found work as a messenger in a Pittsburgh telegraph office. His skill in learning to transcribe telegraphic messages (he became one of the first telegraphers in the country able to take messages by sound) brought him to the attention of a Pennsylvania Railroad official, and before he was twenty, he had begun his ascent to the highest ranks of industry. After the Civil War, he shifted his attention to the growing iron industry; in 1873 he invested all his assets in the development of the first American steel mills. Two decades later he was one of the wealthiest men in the world. In 1901 he abruptly resigned from his businesses and spent the remaining years of his life as a philanthropist. By the time of his death in 1919, he had given away some \$350 million. (Culver Pictures, Inc.)

New Managerial Techniques

As a result, corporate leaders introduced a set of managerial techniques—the genesis of modern business administration—that relied on the division of responsibilities, a carefully designed hierarchy of control, modern cost-accounting procedures, and



JOHN D. ROCKEFELLER Rockefeller's Standard Oil company became perhaps the largest and most powerful monopoly in America in the late nineteenth century, and Rockefeller himself became one of the nation's wealthiest and most controversial men. (Culver Pictures, Inc.)

perhaps above all a new breed of business executive: the "middle manager," who formed a layer of command between workers and owners. Beginning in the railroad corporations, these new management techniques moved quickly into virtually every area of large-scale industry. Efficient administrative capabilities helped make possible another major feature of the modern corporation: consolidation.

Consolidating Corporate America

Businessmen created large, consolidated organizations primarily through two methods. One was "horizontal integration"—the combining of a number of firms engaged in the same enterprise into a single corporation. The consolidation of many different railroad lines into one company was an example. Another method, which became popular in the 1890s, was "vertical integration"—the taking over of all the different businesses on which a company relied for its primary function (as in the case of Carnegie Steel).

Horizontal and Vertical Integration

The most celebrated corporate empire of the late nineteenth century was John D. Rockefeller's Standard Oil, a great combination created through both horizontal and vertical integration. Shortly after the Civil War, Rockefeller launched a refining company in Cleveland and immediately began trying to eliminate his competition. Allying himself with other wealthy capitalists, he proceeded methodically to buy out competing refineries. In 1870, he formed the Standard Oil Company of Ohio; within a few years it had acquired twenty of the twenty-five refineries in Cleveland, as well as plants in Pittsburgh, Philadelphia, New York, and Baltimore. So far, Rockefeller had expanded only horizontally. But soon he began expanding vertically as well. He built his own barrel factories, terminal warehouses, and pipelines. Standard Oil owned its own freight cars and developed its own marketing organization. By the 1880s, Rockefeller had established such dominance within the petroleum industry that to much of the nation he served as the leading symbol of monopoly. He controlled access to 90 percent of the refined oil in the United States.

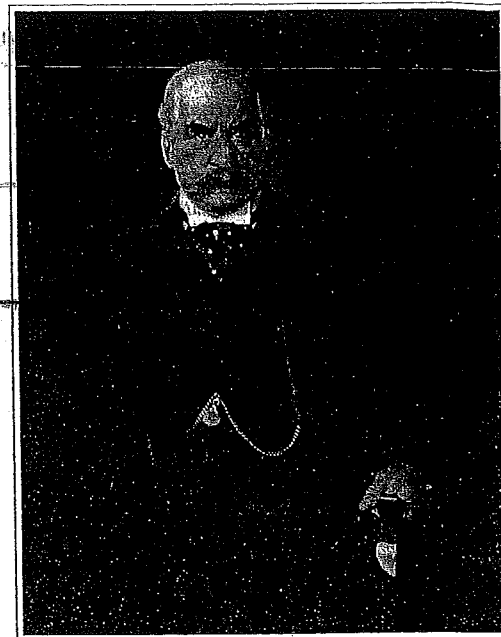
Rockefeller and other industrialists saw consolidation as a way to cope with what they believed was the greatest curse of the modern economy: "cutthroat competition." Most businessmen claimed to believe in free enterprise and a competitive marketplace, but in fact they feared the existence of too many competing firms, convinced that substantial competition could spell instability and ruin for all. A successful enterprise, many capitalists believed (but did not say publicly), was one that could eliminate or absorb its competitors.

As the movement toward combination accelerated, new vehicles emerged to facilitate it. The railroads began making so-called pool arrangements—informal agreements among various companies to stabilize rates and divide markets (arrangements that would in later years be known as cartels). But the pools did not work very well. If even a few firms in an industry were unwilling to cooperate (as was almost always the case), the pool arrangements collapsed.

The Trust and the Holding Company

→ The failure of the pools led to new techniques of consolidation resting less on cooperation than on centralized control. At first, the most successful such technique was the creation of the "trust,"—pioneered by Standard Oil in the early 1880s and perfected by the banker J. P. Morgan. Over time, the word "trust" became a term for any great economic combination. But the trust was in fact a particular kind of organization. Under a trust agreement, stockholders in individual corporations transferred their stocks to a small group of trustees in exchange for shares in the trust itself. Owners of trust certificates

The Trust Agreement



J. PIERPONT MORGAN This arresting 1903 portrait by the great photographer Alfred Steichen captures something of the intimidating power of J. Pierpont Morgan, the most powerful financier in America. This photograph is sometimes known as the "dagger portrait," because Morgan appears to be holding a knife in his left hand. In fact, the shiny object is the arm of his chair. (The Museum of Modern Art/Licensed By SCALA/Art Resource, NY)

often had no direct control over the decisions of the trustees; they simply received a share of the profits of the combination. The trustees themselves, on the other hand, might literally own only a few companies but could exercise effective control over many.

In 1889, the state of New Jersey helped produce a third form of consolidation by changing its laws of incorporation to permit companies actually to buy up other companies. Other states soon followed. That made the trust unnecessary and permitted actual corporate mergers. Rockefeller, for example, quickly relocated Standard Oil to New Jersey and created there what became known as a "holding company"—a central corporate body that would buy up the stock of various members of the Standard Oil trust and establish direct, formal ownership of the corporations in the trust.

By the end of the nineteenth century, as a result of corporate consolidation, 1 percent of the corporations in America were able to control more than 33 percent of the manufacturing. A system of economic organization was emerging that lodged enormous

Rapid Corporate Consolidation

power in the hands of a very few men: the great bankers of New York such as J. P. Morgan, industrial titans such as Rockefeller (who himself gained control of a major bank), and others.

Whether or not this relentless concentration of economic power was the only way or the best way to promote industrial expansion became a major source of debate in America. But it is clear that, whatever else they may have done, the industrial giants of the era were responsible for substantial economic growth. They were integrating operations, cutting costs, creating a great industrial infrastructure, stimulating new markets, creating jobs for a vast new pool of unskilled workers, and opening the way to large-scale mass production. They were also creating the basis for some of the greatest public controversies of their era.

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CAPITALISM AND ITS CRITICS

The rise of big business was not without its critics. Farmers and workers saw in the growth of the new corporate power centers a threat to notions of a republican society in which wealth and authority were widely distributed. Middle-class critics pointed to the corruption that the new industrial titans seemed to produce in their own enterprises and in local, state, and national politics. The growing criticisms challenged the captains of industry to defend the new corporate economy, to convince the public (and themselves) that it was compatible with the ideology of individualism and equal opportunity that had long been central to the American self-image.

The "Self-Made Man"

The rationale for modern capitalism rested squarely on the older ideology of individualism. The new industrial economy, its defenders argued, was not reducing opportunities for individual advancement, but expanding them. It was providing every individual with a chance to succeed and attain great wealth.

There was an element of truth in such claims, but only a small one. Before the Civil War there had been few millionaires in America; by 1892

Myth of the Self-Made Man

there were more than 4,000. Some were in fact what almost

all millionaires claimed to be: "self-made men." Andrew Carnegie had worked as a bobbin boy in a Pittsburgh cotton mill; John D. Rockefeller had begun as a clerk in a Cleveland commission house; E. H. Harriman, a great railroad tycoon, had begun as a broker's office boy. But most of the new business tycoons had begun their careers from positions of wealth and privilege.

Nor was their rise to power and prominence always a result simply of hard work and ingenuity, as they liked to claim. It was also a result of ruthlessness, arrogance, and, at times, rampant corruption. The railroad magnate



"MODERN COLOSSUS OF (RAIL) ROADS" Known as the "Commodore," accumulated one fortune by consolidating several large railroad companies in the 1860s. His name became a synonym for enormous wealth, but also (in the eyes of many corporate power—as suggested in this cartoon) as a symbol of astride his empire and manipulating its parts.

Cornelius Vanderbilt expressed the corporate tycoons with his belligerent care about the law? H'aint I got the son William, with his oft-quoted statement, "damned." Industrialists made large firms to politicians, political parties, and go exchange for assistance and support. not, politicians responded as they had. Standard Oil did everything to the Oil refine it. A member of the Pennsylvania reportedly said: "Mr. Speaker, I move v Pennsylvania Railroad has more business act." During the notorious "Erie War" Cornelius Vanderbilt battled Jay Gould for control of the Erie Railroad, both offered lavish bribes to members of legislature. The market price of legislation was \$15,000 a head. One enterprising